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AFTER ACTION REPORT  
EARTHQUAKE MEDICAL EXERCISE

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# Proclamation

WHEREAS, 1980 marks the 74th Anniversary of the 1906 Great San Francisco Earthquake and Fire; and

WHEREAS, Scientists believe that earthquakes of this magnitude occur about every 75-100 years, meaning that another great earthquake could strike San Francisco at any time; and

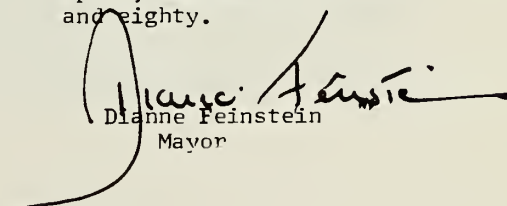
WHEREAS, Even though scientific measures are not yet sophisticated enough to predict exactly when and where the next great earthquake may occur, San Francisco is updating our Emergency Services in order to prepare all of our citizens on what to do should such a catastrophe strike; and

WHEREAS, On April 18, 1980, the 74th Anniversary of the 1906 Earthquake, San Francisco will join with the State in an earthquake disaster exercise to test and to train our City's medical and other emergency services, along with responsible City officials, in how to respond to such a cataclysmic event; now

THEREFORE, BE IT RESOLVED THAT I, Dianne Feinstein, Mayor of the City and County of San Francisco, do hereby proclaim April 13-18, 1980, as EARTHQUAKE AWARENESS WEEK IN SAN FRANCISCO and do urge all San Franciscans to cooperate fully with our simulated earthquake drill on April 18th.



IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City and County of San Francisco to be affixed this fourteenth day of April, nineteen hundred and eighty.

  
Dianne Feinstein  
Mayor

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## We can profit from 'fake quake day'

**S**AN FRANCISCANS will observe the 74th anniversary of the April 18, 1906, earthquake next week, in a mock-quake exercise designed to test The City's preparedness for a heavy jolt. What they will find out is that The City is hardly prepared at all for a big quake's aftermath.

San Francisco may be one of the worst prepared cities in California for handling an earthquake disaster. But more interest has been generated recently in better earthquake preparations, thanks to four jolts registering more than 5 points on the Richter scale in Northern California during the past 12 months. Those have shaken Californians out of their ho-hum attitude about quakes.

The practice effort a week from today is intended to replicate, in some degree, the 1906 experience, which of course all of us hope will not occur in reality again. But it's good that an effort is being made to better plan for such a disaster, should it occur.

To that end, the rehearsal is valuable for the lessons that may be learned about how emergency services and communications could be provided, and how police, fire and other agencies could respond in such a situation. Special emphasis in the disaster exercise will be placed on the

providing of medical care.

As for the present capabilities, they appear to be entirely inadequate. Telephone service could be knocked out, and an interdepartmental 24-hour emergency communications system for directing relief efforts is not in place. The Board of Supervisors has yet to approve Mayor Feinstein's request for \$200,000 to install disaster communications equipment.

One system in place today is the same technology used by firemen in the 1906 quake, the "call box," which city emergency services Director Philip Day wants restored to service and maintained. This method doesn't rely on radio and would afford an alternative way for city officials to communicate if all else failed. Ironically, those old-fashioned but reliable call boxes have fallen into disrepair for lack of funds to maintain them.

Communications preparedness isn't all that's lacking for San Francisco, though, as we have noted in previous commentary. Schools, transportation systems, utilities, police, fire and rescue agencies need to put paper plans into actual practice.

If the fake quake drill points out ways to improve those plans, it will be well worthwhile.



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DIANNE FEINSTEIN  
MAYOR

PHILIP S. DAY, JR.  
DIRECTOR

July 7, 1980

INTRODUCTION

The City of San Francisco, in conjunction with the State of California, conducted an earthquake exercise on April 18, 1980, simulating a repeat of the 1906 San Francisco earthquake.

The earthquake exercise, which was primarily a medical evacuation drill, was the first of a series planned for San Francisco. The objective was to familiarize Departments/Agencies with procedures and techniques to be implemented in the event of a major earthquake, and as a training vehicle to help City emergency workers become more familiar with their tasks.

The exercise involved San Francisco's Office of Emergency Services, San Francisco Hospitals and schools; the American Red Cross; elements of the San Francisco Police, Fire, Social Services, Electricity and Public Health Departments; the California National Guard, State Office of Emergency Services, and the State Department of Health Services. Local overall coordination was provided by the San Francisco Office of Emergency Services. The exercise commenced with a simulated earthquake at 5:13 a.m. on April 18th. The City's interim Command Post/EOC at Central Fire Alarm Station on Turk Street became operational at 9:00 a.m. Highlights were as follows:

- a. Earthquake drills were conducted in the San Francisco Unified School District schools, and most private and parochial schools in the City during the course of the day.
- b. 20 City hospitals commenced their mass care drills at 10:40 a.m.
- c. City fire fighters, police, and paramedic reinforcements arrived in Golden Gate Park from Hamilton AFB, 20 miles north of San Francisco, at 1:30 p.m.
- d. From 1:30 to 2:00 p.m. "casualties" were evacuated, by Army National Guard helicopters, from the "Big Rec" area in Golden Gate Park.
- e. From 2:25 to 2:55 p.m. casualties were evacuated by helicopter from Moscone Playground in the Marina.

- f. At 2:00 p.m., the Mayor and Fire Chief conducted an aerial reconnaissance of the City.
- g. At 3:00 p.m., the Mayor and assistants conducted a critique and press conference in the Moscone Recreational Center.
- h. From 3:00 to 4:30 p.m., the American Red Cross in coordination with the San Francisco Unified School District and the Department of Social Services conducted drills at each of the City's 11 designated mass care facilities.

## MEDICAL ASPECTS OF MEDEX-80

### INTRODUCTION

The medical evacuation exercise held on April 18, 1980 was divided into two parts. These parts were: 1) the preparatory period prior to April 18, and 2) the actual drill held on April 18.

### DISCUSSION

Preparation for the medical evacuation exercise commenced several months before the actual drill day. During this period, preparation was undertaken by the Department of Public Health, the Medical Society, the Blood Bank, the Hospital Conference, the Red Cross, the Office of Emergency Services and other City departments including Police, Fire and Electricity.

An early activity was the review and revision of the Triage and Emergency Medical Response Teams' Plan by the Department of Public Health and the Medical Society of San Francisco. Achieving maximum agreement by physicians on the plan was a matter of some urgency as a large number of physicians and other medical personnel had to be trained in triage prior to the exercise. Another major activity, started early by the Hospital Conference, was the preparation of scenarios for individual hospitals participating in the drill. In addition, a subcommittee of the Emergency Medical Care Committee reviewed and revised the Communications Annex relating to the hospital radio network.

All of the participating groups did their planning in such a way as to create a positive and coordinated work effort. A major policy question was raised concerning the responsibility for operation of the Casualty Collection Points; an agreement was reached that the responsibility would be assigned to the San Francisco Department of Public Health Emergency Medical Service. The Emergency Medical Service working with all involved organizations, including the California National Guard, planned the drill at each of the Casualty Collection Points.

The Department of Public Health, in coordination with the Office of Emergency Services, planned the communications drill using the Emergency Medical Service communications system and the Hospital Radio Network. The emphasis on Emergency Medical Service communications related to the ambulance service and the evacuation through the Casualty Collection Points. The emphasis on the Hospital Radio Network related to the information in the individual hospital scenarios and the routinely furnished information concerning staffing, hospital beds, and blood supply.

Also, as a matter of preparation, meetings were held by the Coroner with a committee of local undertakers as well as with representatives of the Dental Society. Information was provided to a local convalescent hospital which had expressed interest in performing a leadership role among nursing homes.



Meetings were also held with representatives of the Medical Disaster Planning unit of the State Department of Health Services. There were also meetings with the Department of Electricity concerning the use of radio equipment at the Emergency Operations Center. During the two weeks prior to the day of the drill, there were communications checks and interface with representatives of participating City departments.

Prior to the exercise the Department of Public Health, Office of Emergency Services, representatives of the Hospital Conference, the Water Department and the Department of Public Works met to initiate a program addressing a water availability plan. The discussion focused on supply measures required to reduce the chance of hospitals being without water in a major disaster.

Much time and effort were put into the preparatory phase for the exercise by the participating groups. This preparatory period helped focus attention on various problems and proved to be an important learning period.

On the day of the exercise, April 18, the drill was conducted in accordance with the scenario. On schedule the following actions were taken:

- The Emergency Operations Center was activated.
- The Hospital Radio Network drill undertaken.
- The individual hospital drills commenced.
- The Casualty Collection Points became operational and patients were evacuated by helicopter.
- A drill of Mass Care Facilities was held.

#### COMMENTS

From the experiences of preparing for and conducting the drill, a number of conclusions can be drawn.

First and foremost, the performance of all participating groups was excellent. The drill offered the unique opportunity to exercise a number of different elements in concert as planned. The various groups performed their roles in a manner which displayed good coordination and cooperation. It was observed that the physicians, hospitals, hospital personnel, ambulance companies, paramedics, communications personnel, health personnel and other groups worked quite well together in performing their respective functions and duties.

Some of the problems which became apparent were:

- a. The Emergency Operations Center appeared to be much too small and noisy. Even with only a minimum staff on duty, the facility was crowded. The noise which developed from the various radio communicators made it extremely difficult to hear the radio communications. At this location there was difficulty in communicating through the Emergency Medical Service (EMS) communications system using EMS portable radios.

- b. The emergency medical dispatch facility, 'C-MED', at Central Emergency Hospital had a communications failure on Coordinate Channel No. 2. The cause of this problem is under study.
- c. At San Francisco General Hospital, there was a lack of capability for medical personnel to communicate from one floor to the next.
- d. At the scene of the multiple casualty response at San Francisco General Hospital, the following items became apparent:
  - (1) The field supervisor had no communications with police and fire units. Attempting to route communications through 'C-MED' to the police and fire communications centers did not work satisfactorily.
  - (2) The treatment area needs to be enlarged with designated areas for priority I and II patients. Minimally injured should be directed elsewhere for care.
  - (3) Patients should be placed in a line.
  - (4) There is need for a medical response team kit.
- e. With regard to triage, the designations of I, II, X seemed to be inadequate because of the expectant category of patient. There is need to have the category IIE distinguished from II (delayed).
- f. There is need for a standard tag for patients who are triaged.
- g. The use of the Hospital Radio Network needs to be studied to determine how the system can be used to maximize its efficiency and effectiveness. During the drill the routine collection of information occupied almost 100% of the time of the system, and thereby, eliminated the opportunity to use the system for other communication traffic. Also, there was a question of protocol on how this system should function if a hospital sends a message indicating it needs a certain kind of physician or medical personnel. Should the hospital acting as the radio control center communicate the request to any other hospital or hospitals in order to obtain staff for the hospital making a request, or should action on this type of matter be the responsibility of the medical and health personnel at the Emergency Operating Center?
- h. A program is needed to provide personnel who have or will have disaster assignments with appropriate identification cards.

- i. A review program is needed to determine what can be done to increase the number of portable radios which would be available to medical and health personnel in event of a major disaster. Likewise, a program is needed to determine what can be done to increase the availability of first aid and medical supplies during the first 72 hours of a major disaster.
- j. The disaster exercise showed the benefit of using a professional press officer working at the Office of Emergency Services. Ideally, on a similar exercise, a press officer should start work at least four to six weeks in advance of the exercise.



## EMERGENCY OPERATIONS CENTER

### OPERATIONS - MEDEX 80

#### OBJECTIVE:

To provide an opportunity for limited command and control elements to assemble with associated personnel, communications equipment and other management tools (i.e. status boards) to perform in a controlled and limited emergency environment.

To allow Emergency Operations Center personnel to evaluate the adequacy of current management tools.

To verify the radio communications concept proposed to provide the link/interface between the Emergency Operations Center (EOC), the City emergency response departments' communications centers, other levels of government and/or assistance elements that would come into San Francisco in event of a disaster situation, and emergency care facilities - hospitals medical evacuation points etc.

#### ORGANIZATION:

The Emergency Operations Center staff organization included:

##### City Departments

- Police
- Fire
- Dept. of Public Health - Emergency Ambulance Service
- Office of Emergency Services

##### Other

- American Red Cross
- Radio Amateur Civil Emergency Service (RACES)
- Army National Guard
- Sixth U.S. Army

## ORGANIZATION - (cont'd)

### RESPONSIBILITIES:

Police - In addition to providing, through its liaison officer, a link to the Police Communications Center, the Police Department provided local control and security for the EOC area.

Fire - Since the EOC was located in the Fire Department Communications Center and the total Fire Department was not involved, it was necessary to establish procedures to ensure that interference with actual emergency responses did not occur. This was achieved through a senior Deputy Chief assigned to the EOC exercise element.

Ambulance Service - The City's Emergency Ambulance Service assigned paramedic personnel as communicators/controllers to complete the link to the City ambulance dispatch center and to the designated hospital which acted as the control for the medical disaster radio network.

Electricity - The Department of Electricity assigned radio technicians to provide maintenance support and assistance on an as needed basis.

Emergency Services - The Office of Emergency Services, as the agency responsible for disaster planning, advisor to the Mayor, and liaison to higher level government disaster planning elements, assigned personnel to organize the EOC facility, staff the communications center and coordinate and direct the EOC operational element.

Red Cross - The American Red Cross (ARC) representative with communication assistance provided by members of the Radio Amateur Civil Emergency Service (RACES) was the link to the ARC Headquarters and the designated emergency Mass Care Facilities throughout the City. Additionally, the RACES group provided a secondary communications link to the Casualty Collection Evacuation Points.

National Guard - The thrust of the exercise was the air evacuation of injured from the urban environment. The responsibility for the evacuation was given to the California Army National Guard; therefore, an ANG Liaison element was assigned to the EOC to monitor and coordinate air operations.

## ORGANIZATION - (cont'd)

Army - The proximity of Headquarters, Sixth U.S. Army and the assistance role and/or responsibility Sixth Army would have in event of a major disaster surfaced - early on - the requirement for a liaison element in the EOC.

## FACILITIES:

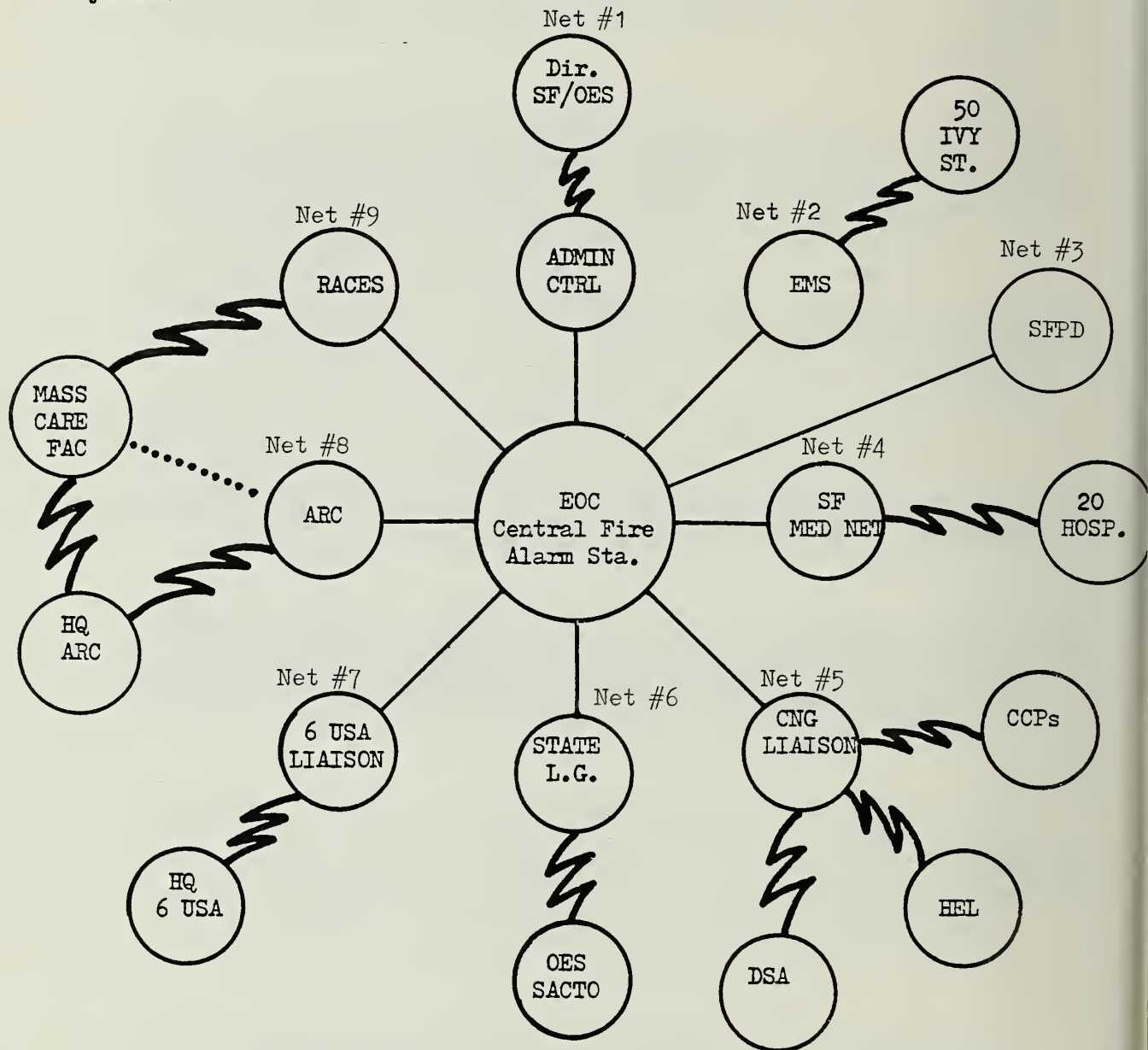
Access into the compound area was controlled and limited to a single point of entry. Passes were issued to entrants at this point. To preclude interference with Fire Department operations, the EOC operation was limited to a single basement room area. A basement rear entry allowed access into the immediate EOC area. Though the media had access to the EOC, space limitation required that an outdoor briefing area be developed for the media.

Prior to the exercise, the Department of Electricity provided a temporary radio consolette to interface with the 20 hospitals in San Francisco, and co-axial cable leads from antennas on the City's communications van. The Pacific Telephone Company installed temporary telephones in the EOC as well as providing a portable pay telephone unit for use of the media.

Map boards, charts, to include air control scheduling charts, were provided by the Office of Emergency Services. Working elements of other agencies provided charts or other management tools required for their operation.

COMMUNICATIONS:

The Emergency Operations Center (EOC) Exercise Radio Communications System.





COMMUNICATIONS - (cont'd)

- NET #1      This Net was the Command and Control Net and consisted of portable radios assigned to:
- Mayor/Director - Emergency Services
  - President - Board of Supervisors
  - Director - Department of Public Health
  - Chief - S.F. Fire Department
  - Emergency Services Controller - EOC
  - Emergency Services/Controllers - Evacuation Sites
- NET #2      This Net was the link to the Emergency Ambulance Dispatch Center and was by portable radio from the EOC.
- NET #3      This link was by portable radio from the Police Liaison Officer to the Police Communication Center.
- NET #4      This Net connected the 20 public and private hospitals and the blood bank with the EOC. Though communications, from the EOC, was to a control hospital, all inter-hospital radio traffic could be monitored by the EOC. However, communications was established directly, from the EOC, with the blood bank.
- NET #5      The Army National Guard operated a mobile unit with remote transceiver equipment in the EOC proper. This Net was the link to the evacuation points in the City, helicopters, and the Disaster Support Area (DSA) that was established approximately 40 miles north of San Francisco.
- NET #6      This Net linked the EOC with the California State Office of Emergency Services in Sacramento, California, approximately 100 miles north of San Francisco. The Net established the link to the Governor's Office and would be most important to expedite State/National level disaster assistance. The link was achieved by portable radio with a co-axial cable connection to an exterior antenna.
- NET #7      This Net linked, using a portable radio unit and exterior antenna, the SF-EOC with the Sixth U.S. Army Emergency Operations Center at the Presidio of San Francisco.

## COMMUNICATIONS - (cont'd):

NET #8 & #9 These Nets were manned by the RACES volunteer group who 'brought-in' their own portable/console equipment. They provided the links to the local Red Cross headquarters as well as to the Mass Care Facilities and evacuation sites.

## COMMENTS:

- a. The established objectives were either met, verified or brought to light areas that need adjustment and/or refinement.
- b. Personnel assigned to the EOC must remain available and relief personnel must also be available. This was particularly true of the para-medical who ended up operating two radios and posting information status boards.
- c. The EOC area which houses communication equipment must be acoustically treated. It was obvious that the radios in the EOC must be equipped with earphones.
- d. A public relations/media briefer must be included as a separate member to the EOC staff. This individual must limit the intrusion of media into the operational areas to reduce the confusion and minimize the negative impact this intrusion would have on those receiving information or participating in the decision making process.
- e. The space allocated to the EOC was inadequate. This would be compounded in the event of a true major disaster and the need to bring in more emergency response/decision making personnel.
- f. Even though expedients were used for radio communications during the exercise, the communications concept as adopted to provide the link/interface between the EOC and the operating elements proved viable.



## MASS CARE FACILITIES DRILL

### PURPOSE

The purpose of this phase of the drill was to exercise the eleven mass care facilities' readiness in response to disaster conditions.

### DISCUSSION

Tested on this day were:

- a. Effectiveness of shelter managers
- b. Role of Department of Social Services (DSS) personnel
- c. Role of Red Cross nurses
- d. Radio communications between shelters and Red Cross headquarters

The preparedness planning for this drill was to a large extent responsible for its success. The Red Cross shelter chairman and assistant disaster director had spent one-half day at each of the nine designated schools, meeting with the principals, shelter managers, Department of Social Services personnel and Red Cross nurses. The purpose of each meeting was to: 1) orient the school staff as to their roles in the shelter, 2) familiarize the DSS personnel and Red Cross nurses with the facilities, 3) evaluate the school facility as to space utilization in event of disaster and, 4) update specific information of each facility. In addition, there was a drill orientation for shelter managers which was conducted on April 15th.

Most of the shelter managers at the nine designated schools understood their role, were able to locate their Shelter Manager's binders with checklists and floor plan, and were able to respond to the requests for the number of simulated victims and the number of meals on hand. However, in the one facility, where the shelter manager had to leave, there was no backup person to take charge and the other school personnel were somewhat confused as to what had to be done. Because of a convention, the facilities at the Civic Auditorium were not available and the shelter manager had to conduct the drill outside the building. The Salvation Army is working on improving their shelter plans for this district (District 2). The University of San Francisco (District 5) is developing specific plans for utilizing their School of Nursing to staff the First Aid stations and their Food Service Department to provide for mass feeding.

The Department of Social Services appointed three staff members for each shelter and 25 responded. One shelter had no coverage, which created some confusion as no on-site personnel were familiar with the role of registering victims. This surfaced a problem area requiring closer coordination and dissemination and clarification of assignments and information to the working level personnel.

Forty-three Red Cross nurses responded to the shelters. Many had concerns that the available disaster medical kits were not complete (i.e. all were missing sterile water and some had been pilfered). However, the fact that the Board of Education has pre-positioned these supplies could be extremely important in time of an actual disaster. The School District has been very cooperative about supplying additional kits for those schools which need them. The mass care facilities which are not schools have no pre-positioned medical supplies.

There were some real concerns in the communications area. Through portable radios borrowed from ARC's Western Field Office and radio-equipped vehicles from other chapters (which might not be available in a wide-spread earthquake situation), communications were possible from all the shelters to the Red Cross headquarters. The movement of the American Red Cross antenna and transmitter to Twin Peaks would substantially improve the ability to communicate between shelters and headquarters. The actual breakdown of the Red Cross radio system in the middle of the mass facilities drill provided a good test of adaptability when the EOC was asked to receive our messages. This was done very efficiently.

Message transmission via the RACES system was not as efficient as usual - possibly due to geographical location or interference; therefore, that system of radio communication might require re-evaluation.

#### EMERGENCY OPERATIONS CENTER

The Red Cross liaison at the EOC reported that in the afternoon there were few City department representatives in the EOC who could respond to policy questions. The staffing patterns, operations and facilities at the EOC need very careful evaluation as it would be very difficult to work in the present building during a major earthquake.

## SAN FRANCISCO SCHOOL PARTICIPATION

### INTRODUCTION

The Unified School District (USD), the Superintendent of Public Schools, and the USD staff agree that it was a successful and necessary learning day for all: students, parents, teachers, emergency operations teams. In particular, the outstanding job of preparation for this day by School District personnel, with the cooperation from the Red Cross and SF/OES, is what made this day a success for SFUSD.

### DISCUSSION

Preparation was initiated by updating and re-writing the SFUSD "Emergency Operations Plan", re-introducing earthquake safety into the curriculum prior to "Earthquake Day" and informing parents and teachers on all necessary aspects of emergency procedures.

Also, each school in the District held an earthquake drill on "Earthquake Day". All agreed that the preplanning had better prepared the schools not only for the smooth drills but also for the real thing, should it occur.

Additionally, the Red Cross in conjunction with School District personnel exercised nine schools as Mass Care Facilities. The SFUSD "Emergency Operations Team" was dispatched to the nine schools to assist the Red Cross with particular emphasis on the building facilities and utilities. Communications equipment stood out as being an effective tool for such an emergency operation.

## DIRECTOR'S COMMENTS

1. MEDEX-80, the San Francisco earthquake exercise of April 18, 1980, was an unqualified success. The effort put forth by the San Francisco medical community, in conjunction with City and State public and private agencies in a tremendous cooperative endeavor speaks well for the City in the event of a future major disaster.
2. Drills conducted at the mass care facilities, which had never been done, were a major accomplishment in a critical area.
3. Most of San Francisco's public and private schools participated in the earthquake exercise. Much worthwhile experience was developed which will enhance future school preparedness. Additionally, it was very evident that this type drill must be incorporated into daily school life.
4. The interim City Command Post at Central Fire Alarm on Turk Street is very confining and limited. Continuing effort must be expended by City officials to find a more satisfactory arrangement or location.
5. Although used on a limited basis, radio communications were marginally satisfactory. More and better drills involving the emergency services, police, fire, ambulance, Red Cross, must be initiated and religiously practiced.
6. The exercise, because it was planned and executed well, had a bonus effect, in that, it gained for the leadership of the City through the extensive media coverage, valuable local and national visibility. This spin-off played a tremendous role in making our citizenry aware of the need to make preparations for the possibility of a major earthquake.
7. Media coverage was excellent and of a positive nature, but it was obvious that in the event of an actual earthquake, City officials would have to expand and plan for an influx and saturation of media coverage. The City must continue its planning for this eventuality.
8. The State of California's participation and cooperation with the City was excellent. Of particular note was the fine effort given by the officers and men of the California National Guard.
9. The concept of the evacuation by helicopter, of injured persons to a medical facility outside of San Francisco deserves additional study. In light of the exercise's result, state planners may want to modify their "massive" evacuation plan.



10. It is mandatory that public officials be able to communicate with citizens during the early hours of a major disaster. Additional research and work should be done to expand the emergency broadcasting system or develop a separate emergency public information system.
11. Future drills should include the participation of the local utilities, Water Department, Transportation, Pacific Telephone, and PG&E.
12. Drills should include on a large scale, the use of coroners required to handle, store and dispose of large number of anticipated fatalities.
13. A public awareness program should be generated by both public and private sectors to train citizens on how to care for themselves during the first hours of a major disaster. A "block by block" or neighborhood organization would appear to be the solution.
14. Although the exercise was a success, it should be remembered that it was a limited drill. From an emergency preparedness point of view, no conclusions should be drawn that the City is in a particularly good or bad state. Much work must be done in the area of communications, public awareness, interim City Command Post, Department staffs coordination and cooperation, Public Works participation with regard to street clearing operations, and the inclusion of major downtown corporations and business in disaster drills.





## ANNEX A

### REPORT OF DISASTER COMMITTEE

### WEST BAY HOSPITAL CONFERENCE

#### Introduction:

The West Bay Hospital Conference, San Francisco Section, appointed a committee to coordinate the Disaster Exercise on April 18, 1980, to test the medical and hospital readiness in San Francisco County. This committee became active in the fall of 1979 and worked closely with the Office of Emergency Services, Philip Day, and the Department of Public Health, Dr. Mervyn Silverman and Joe Mignola, during the planning and drill portions of the exercise.

#### Facilities:

The physical readiness of our hospitals for a major earthquake or other disaster was of primary concern to WBHC and the City and County of San Francisco. A sub-committee was appointed to collect information on such problems as seismic safety and endurance, structural compliance with state codes, emergency power systems, ventilation, water service, sewer service, gas and oxygen service, and access by public and private transportation. Initial indications are that there would be major problems in seismic, water, sewer and gas service should there be an earthquake of the 8.3 magnitude.

#### Communications:

A primary point of the exercise was to test communications between hospitals and the county and other critical elements in the plan such as the Irwin Memorial Blood Bank. The California National Guard also participated in the exercise to test readiness and communications with the county. The control hospital for 1980 is R.K. Davies Medical Center, which acted as the command post for this drill. They did a commendable job in obtaining data and communicating with every facility on the Med-Net radio network.

The critical nature of the communications command post and coordination with the OES command post pointed up the need for frequent drills and ongoing in-service training. The coordinating hospital, and all hospitals, must be prepared on all shifts 24 hours per day to be prepared for a response when a major disaster occurs. Many operations must go on simultaneously and it was learned in several places that communications equipment needs to be separated for clearer functioning, improved for better functioning, and upgraded at the county level so that hospitals, Health Department, Fire and Police can communicate with each other rapidly and accurately. There is some interference on the channel by ambulances outside San Francisco and this needs to be clarified with the FCC.

#### Physician and Medical Personnel:

The physicians participated fully through individual hospitals and coordination by the San Francisco Medical Society. Most hospitals held a special grand round on emergency procedures and triaging. Attendance at all hospitals was outstanding. The Medical Society issued instructions through their Bulletin to all physicians on how and where to respond in a disaster. Many hospitals

and physicians practiced triaging and response. In a real disaster delayed response teams could be sent to various sites and backup personnel could be provided for casualty collection points.(CCP's).

Identification systems are a major problem at the current time since many personnel and physicians live outside San Francisco. Since transportation may be difficult, it is essential to obtain uniform identification systems for all qualified personnel so that they could respond on public transportation such as the ferry system and get across police check lines in a true disaster.

#### Medical Supplies:

It was found that medical supplies in some categories could be quickly depleted and a backup system is required. It is not clear at this time how these would be allocated, nor do we know how these might be charged out by the state or federal government. Critical areas that need attention include pharmaceuticals, intravenous fluids, splints for broken limbs, bandages and other routine medical supplies.

It is well known that San Francisco needs a higher ongoing blood reserve at the blood bank. The report on blood during this drill pointed out that we need a concentrated effort to raise the reserves of blood at any time in the city, and make specific provisions for donation of blood in a real disaster. It has been suggested that three or four additional sites be designated and people trained to collect blood to assist Irwin Memorial in a true disaster. This is not to downplay the marvelous efforts of Irwin Memorial Blood Bank, but rather to point up the general need for community support of the blood bank to increase reserves and prepare citizens to a level of awareness for blood in a real disaster.

#### Water:

Water is a crucial element both in public sanitation and as a coolant for emergency generators and ventilation systems in a disaster. The Facilities Sub-Committee of WBHC started meeting with the County and had progressive meetings about solving some of the water questions through routing water via lines from the various reservoirs and water systems. The County's help on this matter was much appreciated and an ongoing study will take place with the Conference and the County.

#### Bed Availability:

As part of the exercise, WBHC called every hospital in the system as to bed availability in the various categories. While each hospital practiced identification of patients who could be discharged to home or other facilities if the beds were needed by critical patients in a disaster, this survey was done to only identify those available open beds on April 18. Out of the city's twenty hospitals, the following bed availability was determined:

|                       |     |
|-----------------------|-----|
| Medical/Surgical beds | 739 |
| CCU/ICU beds          | 87  |
| Psychiatry beds       | 58  |
| Pediatric beds        | 60  |
| Obstetric beds        | 66  |

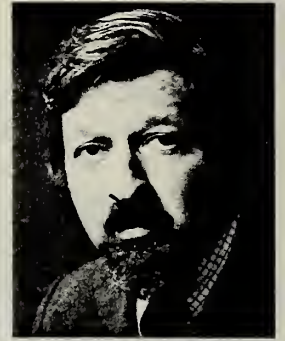
The total number of beds available was slightly over 1,000, and it has been estimated that there could be a need for 5/10,000 beds in a major disaster. This points out the need to maintain a sizeable complement of beds for disasters in San Francisco, and to also have these as backup to other areas should a major disaster occur and San Francisco's medical expertise be needed.. It points out that via air and water the County and National Guard should be prepared to evacuate several thousand patients, and have an excellent triage system, transport system and medevac system operable in this kind of condition. The private and public hospitals can play a meaningful role in backing up the County and National Guard with some physicians and personnel, but this support mechanism has not yet been worked out in clear terms. It would be very useful to have a standard tagging system and classification system of coding patients so that personnel at all sites would be familiar with this terminology and system. This has been referred to the County and the Medical Society for a resolution, but the hospitals stand ready to assist since they will be a major site for tagging.

Summary:

The April 18 exercise was well coordinated and a successful demonstration of cooperation. The hospitals of the WBHC put in tremendous efforts and resources into the successful completion of the drill. A great deal was learned about our readiness and provides a new level of understanding for further progress and coordination with the County. Continuing emphasis will be placed on practicing communications, reviewing facilities and water questions, and making other preparations in concert with the County and S.F. Medical Society. All who participated are to be commended for their fine work.



## President's Message



*David D. Sachs*

## APRIL 18—DISASTER DRILL

On April 18, 1980, the first citywide disaster drill will be held in San Francisco. An 8.3 earthquake will be simulated. The state Office of Emergency Preparedness, the 6th Army, and the National Guard will assist local government in this drill. The medical community, including local hospitals and medical staffs, as well as ambulance companies, will participate. Each hospital has prepared its own scenario, coordinated with the overall plan. The overall director of disaster health services is the director of public health. The private medical care system is being coordinated by a nominee of the Medical Society (since in a real disaster any one individual may not be available, there are three individuals in the position—all with extensive experience in triage—Donald Trunkey, William Moncrief and Jack Jew).

At approximately 8:00 a.m. the simulated disaster will occur. Between 10:00 a.m. and 2:00 p.m. the major part of the medical scenarios will be enacted. Private physicians are asked to participate as they would in a real disaster by assembling at their usual hospital workplace. (In the case of a real disaster, they would be asked to do this, or if transport were a problem, to assemble at the nearest hospital and await instructions as to where they are needed.)

A selected number of physicians will be asked to participate in triage either in the hospital or as part of mobile outreach teams. Additional teams for deferred triage will also be set up. Since only a limited number of the members of a large medical staff can actually participate in triage, each hospital staff is being asked to develop its own supplemental program for medical staff participation. We hope that a number of hospital staffs will offer a grand rounds presentation of the latest strategies in triage, a rapidly changing art.

All physicians are urged to participate in this disaster drill on April 18 in order to improve our levels of both individual and community preparedness for the possible real event.

## APPENDIX 2

### MEDICAL EVALUATOR REPORT (TYPICAL) OFFICE OF EMERGENCY SERVICES

Triage area, with adequate signs, occupied a small theater adjacent to ambulance entrance. Immediately nearby and adequately posted was a holding area, a family center, and a morgue.

At 10:45 I identified myself to the coordinator, and to security personnel. At 10:57 casualties began to arrive. These were mostly children. In the center of the triage area were three carts loaded with supplies, including parenteral fluids. At one side a young woman manned a telephone, relaying messages to the directing surgeon from the hospital control center. The hospital had its own Emergency Medical Treatment tags, and these were filled out and attached to each casualty. Next the casualty walked or was carried on a litter to the screening area, where there were adequate numbers of doctors and nurses and adequate floor space. Some casualties were taken on gurneys to X-Ray, some to the surgical suite; I accompanied one of the latter. There seemed to have been no problem fitting the exercise into the normal hospital operations. I assume that elective surgery had been cancelled for the day. Casualties dismissed from treatment areas were taken to the hospital lobby, where a member of the Social Service staff was in charge of trying to get them back to their homes or a non-hospital dormitory area. I departed the area at 11:35.

#### Strengths

The hospital community was clearly serious about this exercise and anxious to make it a success. Communications were adequate, triage excellent. Staff identification was adequate, physician participation excellent. Moulages were excellent and participation of simulated casualties enthusiastic.

#### Weaknesses

For some reason the problem was activated a few minutes early, according to the coordinator. The surgeon directing triage was not immediately identifiable as such.

#### Conclusion

This was the best carried out exercise of the three hospitals I surveyed. The interest of the hospital administration is also clearly an enduring one, as I observed once before in an exercise carried out about 1968.

## ANNEX B

### REPORT ON CASUALTY COLLECTION POINTS OFFICE OF EMERGENCY SERVICES

#### ORGANIZATION OF CASUALTY COLLECTION POINTS (CCP's)

The criteria for Casualty Collection Points is that they should be organized to allow casualties to be cared for periods up to 24 hours pending the arrival of evacuation helicopters. In this exercise, the casualties were placed in the center of the baseball field in the hot sun, covered with plastic sheets, and allowed to lie there until the helicopters came in. Provisions should have been made to keep the casualties out of the hot sun or out of the weather in areas where they would be more comfortable. Casualties should be segregated within the CCP by degree of injury. Casualties at the CCP at BIG REC were commingled. Ambulatory patients should have been segregated so as to preclude interference with the treatment of the more seriously injured casualties.

#### COMMUNICATIONS

The communications within the Casualty Collection Points proved inadequate. There were no radios available for use by the CCP Commander for intra-CCP communications. The CCP Commander, in an attempt to maintain a count on casualties arriving at the CCP, was relying on arm and hand signals from the paramedic at the ambulance unloading point and thus was unable to determine the number of casualties arriving on each ambulance. The end result was that the CCP Commander lost track of the number of casualties and a check of the actual casualties on the ground proved to be more than those recorded on his tally sheet.

#### MANIFESTING

Manifesting of the casualties for helicopter flight proved to be a problem. Although the manifests were typed in advance (an unrealistic situation), the individual responsible for insuring the copies of the manifest were placed in the hands of the pilot failed to do so in a timely manner. This resulted in additional effort being required by the CCP Commander to insure the manifest got to the pilot. It would have been more appropriate to have the manifest affixed to the stretcher of one of the casualties and the crewmen of the helicopter could merely take it off and hand it to the pilot. The plastic blankets were not properly tied down on the stretchers and thus created a possible safety problem. Only the first aircraft recognized this problem and required the plastic blankets to be secured to the stretchers before they allowed the stretchers to be carried underneath the rotating blades. On subsequent aircraft loads, the stretchers were moved under the blades without the plastic blankets being tied down. This is a basic safety hazard since these plastic blankets could easily be picked up and sucked up into the blades and thus damaging the aircraft.



## SAFETY

Generally, the overall operation was not difficult to control and safety aspects were quite good. The only problem encountered was with senior officials who had no apparent mission to perform in the operation. Since this was basically a medical evacuation by helicopter, some officials seemed to feel they were exempt from the safety rules established for all other spectators. Unless officials were participating in the exercise, they should abide by the same rules as all other spectators.

## ANNEX C

### EOC OPERATIONS (SHIFT COMMANDER) OFFICE OF EMERGENCY SERVICES

Considering that the exercise was the first one in memory, the overall EOC operation went very well. There were certainly flaws and room for improvement, but then again, one of the primary objectives of the exercise was to identify such problems.

Recommendations for improvement are as follows:

1. A table top exercise was conducted for the overall exercise and this was good. However, since the EOC is the key coordination center, it is believed that it would have been well to conduct a similar pre-exercise session for those assigned to the EOC. There was some confusion as to who was responsible for what in the absence of any detailed written instructions.
2. The new radio equipment provided by the Fire Department worked well as long as the various operators knew how to utilize the equipment. However, there were people assigned to use the radios in both the EOC and the field units who hadn't previously operated the equipment. As a result, there was some initial difficulty in establishing contact with individuals at the various locations. As the exercise proceeded, the degree of proficiency increased; but it was cumbersome to have to learn the basics in the midst of the exercise. In advance of future exercises, it is suggested that a training session be held on operation of the radio equipment and proper use of radio terminology.
3. There is a need to clearly identify who is in charge of exercise operations. As a result of their traditional role, the Fire Department tended to assume command of activities. On the other hand, if the Office of Emergency Services personnel have the overall coordination role, then SFFD needs to be aware that OES personnel in the EOC are in a position of authority as far as overall exercise coordination. The delineation of responsibility should be discussed and identified in a pre-exercise conference.
4. During the exercise, there was a fair amount of "coming and going" among those assigned to the EOC staff. There were times when the services of some EOC members were needed and they were unavailable due to being out of the center. Since the EOC functions as a single point of contact and is responsible for exercise coordination, all assigned positions must be continuously manned. If a staff member needs to leave the EOC for a period of time, they need to ensure that a replacement is available during his/her absence.

In spite of these shortcomings, all went very well. The participants took their roles seriously and all exercise activities occurred on schedule. The only exception was the final helicopter liftoff from Big Rec when a mechanical problem caused a few minutes delay of the aircraft.

MEDEX 80  
SCENARIO  
APPENDIX 1

Time Sequence

0600 Earthquake occurs (simulated).  
0830 Mayor declares emergency (simulated).  
0900 SF/EOC activated.  
1030 Establish radio communication with 50 Ivy Street  
1040 EOC request R.K. Davies to commence radio checks.  
1040 Hospital Coord. commence medical drills.  
1200 Police & Fire Department units secure, CCP's at Big Rec and Moscone Playground  
1200 RACES establish radio contact with CCP's.  
1200-1230 Mayor visits interim City Command Post at Central Fire Alarm Station, Turk Street.  
1220 CNG helicopters arrive at Big Rec and Moscone Playground with MP's.  
1245-1315 Mayor visits San Francisco General Hospital.  
1300 First arrival of casualties to Big Rec CCP.  
1310 VIPs and newsmen arrive at Big Rec from Sacramento.  
1300-1330 Police and Fire Dept. personnel flown to Big Rec from Hamilton AFB.  
1315 Bulk of casualties to arrive at Big Rec CCP.  
1320 Last casualties arrive at Big Rec CCP.  
1330 Evacuation begins from Big Rec CCP.  
1330-1400 Mayor visits Big Rec CCP.  
1340 First casualties arrive at Moscone Playground CCP.  
1400 Last casualties evacuated from Big Rec CCP.  
1400 ARC establishes radio contact with Red Cross Headquarters.  
1400-1420 Mayor conducts City recon, and comm. check with City CP.  
1405 Bulk of casualties to Moscone Playground CCP.  
1415 Last casualties arrive at Moscone Playground CCP.  
1415 Close Big Rec CCP.  
1425 Evacuation begins from Moscone Playground CCP.  
1425-1455 Mayor visits Moscone Playground CCP.  
1430 RACES establish radio contact with Mass Care Facilities.  
1455 Last casualties evacuated from Moscone Playground CCP.  
1500 Mayor conducts critique and press conference.  
1500 Multiple care facilities commence drills - 11 sites.  
1510 Close Moscone CCP.  
1530 Radio Net closes.

## ANNEX D

### AMERICAN RED CROSS MASS CARE FACILITIES DRILL

April 18, 1980

#### GENERAL INFORMATION

Purpose: To evaluate preparedness of the eleven mass care facilities' readiness in response to disaster conditions.

Insurance Coverage: All volunteer personnel participating in the Red Cross portion of the April 18th drill will be covered by Workmen's Compensation Law provided their signed "Disaster Service Workers Registration" forms are on file in the Disaster Office of ARC. Anyone who has not previously completed this form should do so prior to the drill (copy attached). Non-registered volunteers who appear at the shelters will be asked to complete this form.

Actual Emergency During the Exercise: If an actual emergency of such magnitude arises during the exercise to require response of any participant, the exercise (or affected portion) will be terminated.

Safety First: This is an exercise and activities will be conducted in a manner to insure unnecessary risk to life, limb or property. Laws regarding personal or vehicular conduct are to be observed.

Communications: Based on the assumption that telephone lines will be either overloaded or out of commission, communications between the mass care facilities and the American Red Cross will be transmitted via the Red Cross radio system 47.42 mcz, as well as via RACES amateur network. All communications are to carry the message "this is an exercise".

GENERAL SCENARIO: See attached scenario and schedule prepared by the San Francisco Office of Emergency Services. Red Cross will participate in the portion affecting the mass care facilities. Red Cross personnel will also staff the Emergency Operations Center.



## APPENDIX 1

### MASS CARE SCENARIO

At 1500 hours the eleven designated mass care facilities will be opened in response to the disaster which has affected San Francisco. Each facility will be staffed by a shelter manager, Department of Social Services personnel, Red Cross nurses, Red Cross resource personnel and Amateur Radio (RACES) personnel. No victims will be utilized.

The Shelter Manager will be responsible for seeing that a Red Cross plastic sign is posted on the entry door to the shelter. Shelter managers are asked to locate and review the material in the Shelter notebook. After reviewing the available food supplies, they are to contact the Red Cross headquarters, utilizing both the RACES network and the ARC radio (located in the Red Cross vehicle), to report the number of simulated victims (using the average daily attendance figures for that day) and the number of meals they will be able to serve.

Department of Social Services personnel, who will act as registrars, will be responsible for locating tables and chairs, setting them up in the reception area, and using shelter registration forms (ARC 5972) to register all incoming personnel, visitors and passersby. Volunteers not previously registered with Workmen's Compensation, should also sign the "Disaster Service Workers Registration" form at the reception desk. Registrars should indicate their areas with signs. At the completion of the drill, DSS personnel will return all equipment to its previous location and give completed forms to the Red Cross resource persons for return to the Red Cross headquarters.

Red Cross nurses will be responsible for locating their assigned rooms and and the medical kit with litters. Nurses should identify their locations with "Emergency First Aid" signs. Depending upon the number of nurses responding, a supervisor should be designated and a long term schedule for manning the shelter should be established.

Red Cross resource personnel with radio-equipped vehicles should park as close to the reception area as feasible. Radio communication by the resource personnel with the Red Cross headquarters should be established at 1500 hours. They will deliver shelter registration forms, disaster workers registration forms, registration and first aid signs to the reception area. Their primary role is to observe, not to participate. However, they will transmit the shelter managers' messages to the Red Cross headquarters. At the end of the drill, they will return completed forms to the Red Cross and make radio contact with headquarters when they leave the scene.

All assigned personnel should familiarize themselves with the designated areas of the shelters. Floor plans showing designated areas are on file in the Shelter notebook.

All radio communications should be completed by 1530 hours.

ANNEX E

San Francisco Unified School District 135 Van Ness Avenue San Francisco California

April 7, 1980

MEMORANDUM

TO: All Principals and Site Managers  
FROM: Joseph Calleja, Safety Coordinator  
SUBJECT: "Earthquake Day" Packet

April 18, 1980 will be "Earthquake Day." This will be a medical preparedness exercise which will involve the Office of Emergency Services, hospitals, schools, the Red Cross, elements of the Police, Fire, Public Health Departments and the California National Guard. The exercise will be held in conjunction with a statewide effort scheduled for April 18 and 19. To assist the principals in preparing and planning for this day, the following information is included in the enclosed packet:

1. Emergency Operations Plan - April 1980

The District 1976 plan has been updated to serve as a guideline for each school in preparing site emergency plans.

2. Dr. Del Prado Memorandum - April 7, 1980

This memorandum and check-off list identifies the activities that should take place before and on "Earthquake Day" at each site.

3. Classroom Earthquake Instructions

A sufficient number of yellow cards with printed earthquake instructions are included for those classrooms that do not have such instructions posted.

4. Communication Information Bulletin

District staff has developed a two-way radio communication system to be used during an emergency. There will be nine mobile units in order that personnel can move from one facility to another, as required.

With this system the Superintendent can communicate with the Mayor, the District mobile units, and the Maintenance Office.

THE MAYOR'S COMMUNICATIONS PLAN WILL NOT BE OPERATIVE ON APRIL 18TH.

5. Schedule of Events for April 18, 1980

This schedule is for your information only. Note that the only activity besides the requested discussion and drills at each school is the 3:00 to 4:30 p.m. meetings at the 9 district and two non-district mass care centers.

For information of the site administrators the following is included in this memorandum.

### Medical Supply Inventory List

All schools should have a box of medical supplies. These supplies were delivered to each school in 1978. If you do not have these supplies please write to Joseph Calleja, 135 Van Ness Avenue, and indicate items to be replaced. (A copy of the Medical Supply Inventory is attached).

### Civil Defense Supplies

In 1963 Civil Defense Supplies were placed at the following schools:

|                    |              |                      |
|--------------------|--------------|----------------------|
| Alvarado           | Golden Gate  | Noriega              |
| Bret Harte         | Hancock      | Patrick Henry        |
| Clarendon          | Hawthorne    | R.L. Stevenson       |
| Cleveland          | John McLaren | Sanchez              |
| Emerson            | John Muir    | San Miguel           |
| Commodore Stockton | Jose Ortega  | Sir Francis Drake    |
| Douglas            | Lakeshore    | Twin Peaks           |
| William DeAvila    | Lawton       | V. Valley Elementary |
| Edison             | Longfellow   | Winfield Scott       |

The supplies included food (crackers), water, medical supplies and sanitation kits.

This program has been discontinued. It has been replaced by the Red Cross Mass Care Centers.

The above mentioned schools may discard any of the supplies that have since deteriorated. Those supplies which are still usable may be incorporated with the medical supplies that were distributed to each school in 1978.

### Fire Department Rescue Equipment

In 1963, the Fire Department placed boxes containing rescue equipment in the following schools:

Mission High School  
Marina High School  
A. Lincoln High School  
Anza School  
Visitacion Valley Elementary School

This equipment is to remain at the school.

Radios

A.M.-F.M. battery operated radio will be delivered to each school shortly. New batteries will be delivered to each school periodically to replace the old ones.

Newsletter

A newsletter for distribution to parents will be delivered to all elementary and middle schools by April 14.

Newsletters for high school students' parents will be mailed.

Red Cross Pamphlets

The Red Cross has an excellent pamphlet entitled "Safety and Survival in an Earthquake." Principals may receive free copies by calling the Red Cross at 776-1500.

JC:wpc

cc: Dr. Robert Alioto  
Members of the Cabinet



## APPENDIX 1

### SAN FRANCISCO UNIFIED SCHOOL DISTRICT

#### EMERGENCY OPERATIONS COMMUNICATION PLAN

IF A MAJOR DISASTER STRIKES WHILE SCHOOL IS IN SESSION, the two-way (walkie-talkie type) radios would be dispersed as shown on attached diagram to allow the Superintendent of Schools, Dr. Robert F. Alioto, to coordinate the needs of the students by direct radio contact to the Mayor's Emergency Services Headquarters, the school bus company, Maintenance and Operations, and mobile Emergency Operations Team.

The mobile Emergency Operations Team consists of Maintenance personnel with two-way radios (normally used for S.F.U.S.D. Maintenance and day-to-day emergencies), that are knowledgeable of school facilities within their assigned districts. Their duties will be to:

- . visually assess needs of students
- . visually assess building structural conditions
- . visually assess building utilities and adjust as needed.

The mobile Emergency Operations Team will transmit, via two-way radios all critical information to the Superintendent or his representative to facilitate accessibility to emergency services as needed, i.e. police, fire and medical services.

IF A MAJOR DISASTER STRIKES WHILE SCHOOL IS NOT IN SESSION, the radios would be dispersed in the same manner. However, coordination of needs, in conjunction with the American Red Cross, would be focused on nine secondary schools designated as Mass Care Centers, shown on map and Mass Care Center listing attached. The remaining two of the eleven Mass Care Centers are not school sites, and will not have school district personnel involvement.



#### EMERGENCY OPERATIONS DISTRICTS AND FACILITIES, ZONE 4

#### City & County of San Francisco Earthquake Response Plan

#### CENTERS FOR CASUALTY CARE AND MASS CARE BY DISTRICT

MASS CARE FACILITY A location such as a school, from which lodging, feeding, clothing, registration, welfare inquiry, first-aid and essential social services can be provided to disaster victims during the immediate post-disaster period. Operated by the Red Cross, Department of Social Services, School District, Park and Recreational Department, University of San Francisco and Salvation Army.

CASUALTY CARE FACILITY May be either a Hospital with full capabilities for surgery, X-ray, laboratory, etc. for treating major injuries or it may be a First Aid Station with lesser capabilities for treating less severe injuries. These facilities are comprised of both private and public agencies.



ANNEX F  
MEDIA RELATIONS - PUBLIC INFORMATION  
OFFICE OF EMERGENCY SERVICES

INTRODUCTION

In preparation for MEDEX-80, ten days lead time was barely enough time for the development of media relations. It is recommended the contact for media responsibility be in place at least three weeks in advance of the planned exercise. Just as important is the need for an experienced public relations person to be available during the same time frame to act as an assistant. The job requires a lot of backup assistance.

DISCUSSION

There is no way to estimate the number of media calls that came into the office, but the telephones rang incessantly. All professionals in the office did interviews and briefings.

A "press advisory" was sent out on April 4. On Thursday, April 10, a media briefing was held in the Department of Public Health Meeting Room. Speakers included: Philip S. Day, Jr., Director, SF/OES, Dr. Mervyn F. Silverman, Director, Department of Public Health, Thomas H. Jenkin, SF/OES, Paramedic Robert Navarro, Col. Andrew Wolfe of the California National Guard, and Mr. Pete Ashen of the American Red Cross. Thirty media attended including reporters from a French newspaper, "Le Matin" and International Radio Network from London.

Media calls came in from throughout the country. For example, interviews were done with a Chicago radio station and an Australian television reporter prior to the event. All local radio and TV stations gave extensive pre-publicity as did the pencil press. KSFO radio (local San Francisco station) did a week long prime time series on the drill.

Contact was made with city editors, science writers, news and assignment editors at radio and TV stations. Handout material, including schedules, was sent out. A press release was sent out on April 15, 1980. Arrangements were made for pool photographers and cameramen to ride in both the Mayor and the Fire Chief's helicopters.

Prior to the day of the exercise, key officials visited the interim Command Center on Turk Street and the helicopter evacuation areas to finalize plans and logistics. Contact also was made with the public information officers at the California National Guard and the State Office of Emergency Services in Sacramento.

On the day of the exercise, media calls began at 6:30 a.m. The Command Post was activated at 9 a.m. and many media had already arrived by that time. Press kits including schedules and map handouts were available. There was no way to accurately assess the number of reporters covering the exercise as some went to just one location and some to all three - the Command Post, Big Rec and Moscone Field. It is estimated over 200 reporters covered the exercise; they included two from French newspapers, one from Genoa, Italy, radio network reporters from West Germany, BBC and International Radio Network from London, an Australian television reporter, a newspaper reporter from Vancouver, Canada and others. Sign-up sheets were used but not all signed in. National coverage was provided by Time and Esquire magazines and NBC-TV. National Geographic also had a team covering the event.

The Press Officer, Jane Dillon, also served as a "clearinghouse" for questions on activities at the S. F. Unified School District drills and the 20 hospitals involved. West Bay Hospitals retained Linda Osborne, a public relations consultant, to coordinate their activities.

Mayor Feinstein arrived at the interim Command Post at 12 o'clock noon. She made her inspection and did an outdoor media briefing. Participating with the Mayor were Philip Day, Dr. Silverman, and Chief Casper, Chief, SFFD.

Two City buses provided transportation for the media. Both left the interim Command Post shortly before 12:30 p.m. One going to S. F. General Hospital and the second going to University of California Medical Center. The majority of the media followed the Mayor to S. F. General Hospital. Tom Griffin, Assistant Administrator and Claire Wray coordinated events at this hospital.

Each hospital location - U. S. Medical Center and S. F. General Hospital - provided excellent photo opportunities to the media with triaged and moulaged "injuries".

At 1:30 p.m. both buses arrived at the Big Rec casualty collection point in Golden Gate Park, at which time, additional media joined the group. The Mayor and other City officials were interviewed and photographed at each stop. An assistant to help place reporters with the right person for interview purpose would have been most helpful.

At 2:00 p.m. everyone moved across town to Moscone Field. When the media buses arrived the Mayor, Chief Casper, the Governor and Lt. Governor had already landed in their aircraft. Evacuation of the "injured" was observed and photographed. At 3:00 p.m. a final news conference was held in the recreation building, where all principals participated. No count of media was possible, but the gymnasium was well filled.

#### RECOMMENDATION

For future exercises, it is imperative an experienced professional public relations person handle the media. And, secondly, at least one backup person with PR experience is needed as an assistant.



## APPENDIX 1

### MEMORANDUM

TO: Mel Wax

FROM: Philip S. Day, Jr.

SUBJECT: Outline Press Relations Plan for Earthquake Exercise

1. As a minimum, I feel we should:

- a. Issue a press advisory o/a April 2, 1980.
- b. Have a background briefing for media o/a April 10 in Room 300, 101 Grove (Day, Silverman, National Guard).
- c. Develop a press relations plan immediately.
- d. Establish a press center near the EOC/Central Fire Alarm Station, 1003 Turk Street on day of the exercise.
- e. Develop a press package/handout to include background material, scenario, time schedule, press release, map, etc.
- f. Have an exercise briefing at 1100 hours, April 18, at or near the EOC on Turk Street (Day, Silverman, National Guard).
- g. Establish a small PIO team at the EOC, Big Rec, Moscone Playground in conjunction with the National Guard.
- h. Arrange for pay telephone; for media at the EOC and Moscone Playground.
- i. Consider furnishing bus transportation (MUNI) from EOC to Big Rec to Moscone Playground to City Hall.
- j. Arrange with National Guard for pool coverage of helicopter flights by Mayor and Fire Chief.
- k. Make arrangements for final critique/press conference, 1500 April 18 at Moscone Playground Recreational Center at Buchanan and Chestnut Streets.
- l. National Geographic requests helicopter fly-over permission.
- m. From 1:30 to 2:00 p.m. at "Big Rec" in Golden Gate Park, "casualties" will be evacuated by National Guard Helicopter.
- n. From 2:25 to 2:55 p.m., casualties will be evacuated by helicopter from Moscone playground in the Marina.
- o. At 2:00 p.m., the Mayor and Fire Chief will conduct aerial reconnaissance of the City.
- p. At 3:00 p.m., the Mayor and assistants will conduct a critique and press conference at the Moscone Recreational Center, Buchanan and Chestnut Streets.
- q. From 3:00 to 4:30, 11 mass care facilities in San Francisco will conduct table-top drills in coordination with the American Red Cross, Unified School District, and the Department of Social Services.

There will be a background briefing on this subject in Room 300, 101 Grove  
10:00 a.m., April 10.

Further information and details are available as follows:

Jane Dillon; DPH \_\_\_\_\_

Dr. Mervyn Silverman; DPH \_\_\_\_\_

Mr. Joe Mignola, DPH \_\_\_\_\_

Philip Day, SF/OES \_\_\_\_\_

Chief Casper \_\_\_\_\_

Philip Cali, USD, SF \_\_\_\_\_

Pete Ashen, American Red Cross \_\_\_\_\_

STATE OFFICE OF EMERGENCY SERVICES

Region 2  
ANNEX G

AFTER ACTION REPORT  
CITY & COUNTY OF SAN FRANCISCO  
EARTHQUAKE MEDICAL EXERCISE  
CAL MEDEX - 80

Friday, April 18, 1980

This after action report addresses the three stated purposes of the exercise.

Purpose No. 1 - To conduct an earthquake exercise which will be a "medical evacuation" drill with the object of helping emergency City/Agency workers become more familiar with their important tasks.

It was the opinion of the three observers from State of California OES Region 2 that this purpose had been fulfilled. In as much, as many of the elements, such as debris-filled streets, burning buildings, and damaged life-saving facilities such as communications systems were not obstacles that had to be dealt with, it would be a serious mistake to draw a conclusion that because this portion of the exercise went so well, that everything is in good shape.

Purpose No. 2 - To provide opportunity for elements of the medical community to receive training in first aid and triage of multiple casualties, staging for evacuation of casualties, and ground and air transportation capability.

Based on observation from Region 2 staff present, it is our unanimous conclusion that this purpose was met successfully. Once again, it would be a serious mistake to draw any sense of real security that this portion of the city plan is in good shape, since obviously a highly controlled operating environment, which included time of day, ideal weather conditions and large numbers of available helicopters, was an important factor in the smoothness of the operation.

Purpose No. 3 - To provide the opportunity for City wide school drills, both private and public, as well as the activation and exercising of the City's 11 mass care facilities.

The OES Region 2 observers were able to observe this portion of the exercise on a very limited basis, due to time constraints. From the limited operations we did see of the school drills, there appeared to be a serious dedication on the part of school teachers to carry out their disaster responsibilities.

The OES Region 2 wishes to compliment San Francisco's Director of Emergency Services, Philip S. Day, Jr., and his staff for putting together and outstanding earthquake medical exercise. Based on our experience, we know full well how much time and effort must be devoted to conduct an exercise of this magnitude. Although, in our opinion, the three stated purposes of the exercise were fully

met, there was in addition a spin-off benefit, in the form of greater public awareness of the plans being made by government to protect its citizens, and the fact that each citizen has a responsibility to acquire the knowledge necessary to help himself and his family. Due to the excellent media coverage of this event, a much greater appreciation of what needs to be done to improve overall earthquake preparedness was achieved.

State of California  
Office of Emergency Services, Region 2

Observers:

William W. Ward, Regional Manager  
Harry King, Emergency Services Coordinator  
Donna Darling, Emergency Services Coordinator

April 29, 1980



## ANNEX H

### THE AMERICAN RADIO RELAY LEAGUE, INC.

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#### OFFICE OF THE SECTION EMERGENCY COORDINATOR

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Amateur radio operators have historically provided back-up communications in natural disasters. CalMedex 80 offered an excellent opportunity to test the capacity of San Francisco radio amateurs to furnish such communications under realistic conditions.

#### Objectives:

1. To test the effectiveness of amateur VHF communications, both direct and via repeater, from the EOC to the Red Cross Mass Care Centers and the helicopter landing zones.
2. To test communications with the Red Cross using a portable base station on their nationwide (non-amateur) frequency.
3. To test communication with the California National Guard on their non-amateur Single Sideband (SSB) frequency using specially modified amateur equipment.
4. To test the ability of amateur equipment to operate in the severe radio environment of the EOC where many transmitters would be operating at once. Specifically, to test the effectiveness of a special interference filter in eliminating an interference problem caused by the hospital net radio operating on a frequency adjacent to the amateur band.
5. To test the ability of amateur radio operators to perform effectively in a simulated emergency setting.

#### Observations:

1. Amateurs begin installing equipment at 0830. All equipment was operational by 0900.
2. Test transmissions were made on the California National Guard SSB frequency. Solid circuits were established between the EOC and the following locations: State CNG HQ; Travis DSA; State OES HQ - Sacramento and the Tamalpais relay stations. These circuits were operational at least one hour before the CNG had its equipment installed at the EOC. The CNG CO reported his arrival at the EOC via our circuit.
3. Test transmissions were made on amateur VHF frequencies. These established that communications could easily be maintained between the EOC and the Red Cross Mass Care Centers as well as with the helicopter landing zones using both direct and repeater frequencies. It was found that the amateur communications were always equal to, and at times superior to municipal circuits.
4. Test transmissions on the Red Cross frequency established that the portable base station at the EOC had a wide range of coverage. Information concerning hospital status was relayed to Red Cross HQ via the EOC. At

## Observations (cont.)

one point, our operator assumed control of the Red Cross net due to transmitter failure at Red Cross HQ.

5. Amateur operators were the only ones in the EOC equipped with headphones. The lack of this essential piece of gear caused other radio operators to run their speaker volume controls at a high level. This caused a severe noise problem and contributed to the hectic atmosphere in the EOC.
6. The interference filter was completely effective in eliminating problems caused by the hospital radio, despite the fact that the amateur equipment was located only two feet from the hospital radio in the EOC.
7. The amateur operators at the Red Cross HQ station were poorly trained and unable to carry out their emergency communications duties. When net control of the amateur circuit was transferred to the Red Cross station from the EOC, the situation rapidly deteriorated into confusion.
8. The temporary antennas installed at the EOC would not be available in an actual emergency making effective operation extremely difficult.
9. The newly installed plug circuits in the EOC were not adequate to handle the amount of radio equipment which was used in the exercise.

## Conclusions and Recommendations:

1. Properly trained and equipped amateur radio operators can make a valuable contribution to emergency communications in natural disasters. Untrained personnel impede communications and should be discouraged from participating.
2. Specially modified amateur equipment can provide the capability to communicate with other radio services on non-amateur frequencies.
3. Amateur radio equipment can function in demanding EOC-type environments.
4. Red Cross communications can be supported from the EOC.
5. Permanent antennas should be installed at the EOC for all radio services which would be expected to function in an actual emergency. This would include the Red Cross, hospital net and amateur VHF antennas. Antennas for military frequencies should also be considered.
6. All radio equipment to be used in the EOC should be provided with earphones.
7. Electrical plug circuits at the EOC should be modified to provide at least two separate 20 ampere circuits for communications equipment in order to avoid the severe line voltage which was observed during the exercise.
8. All communications personnel should be properly trained in emergency operating procedures.

## ANNEX I

San Francisco Medical Society

### EARTHQUAKE MEDICAL EXERCISE

April 18, 1980

#### Report of Physician Involvement

The Disaster and Emergency Care Committee of the San Francisco Medical Society was involved in planning efforts during the months preceeding the exercise. Meetings were held on a monthly basis at the Society office. During this process, concern was expressed that physicians might go to the hospitals during the drill and have no specific role to perform. The Medical Society was asked to develop a program for physician involvement.

A meeting of the Chiefs of Staff of the San Francisco hospitals was held on March 20, 1980 at the SFMS Office. A program of medical education on triage was developed. On April 3, Dr. Donald Trunkey gave a presentation on disaster triage at the Medical Society. The Chiefs of Staff and Disaster Committee Chairman were invited. Every hospital was represented. Grand Rounds or other educational programs were held at almost every hospital. More than 1,100 physicians participated.

On the day of the disaster drill, more than 370 physicians were directly involved in the hospital exercises.

As a follow-up the SFMS is involved in three efforts:

1. An article appeared in the June issue of San Francisco Medicine, advising physicians of the procedures for obtaining Disaster Identification Cards.
2. Negotiations are underway to provide exhibit space at the 1981 meeting of the California Medical Association to the California Office of Emergency Services.
3. A questionnaire has been sent to the members of the San Francisco Medical Society to determine response times and distribution of physicians in the event of a major disaster.

Disaster planning continues to be a priority of the San Francisco Medical Society. The Disaster and Emergency Care Committee has begun the process of addressing the problems identified during the exercise on April 18, 1980. It is planned to develop recommendations to deal with these problems during the summer and fall. In addition, we will continue to participate in planning for future exercises.











